



Sorghum production guide lines

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Farmers under community seed banks in Kongwa and Kiteto were supplied with KARI Mtama-1, a sorghum variety released in Tanzania and other parts of East Africa. This flyer provides guidelines for producing the variety such as: 1) Climatic requirements, 2) agronomy and, 3) crop protection

Importance of sorghum

Sorghum is cultivated for grain and as a major food crop in much of South Asia, Africa, and Central America. In the USA, Australia and South America, sorghum is grown mainly for animal feed

In addition to these uses of the grain, sorghum crop residues and green plants also provide sources of animal feed, building material, and fuel for cooking, particularly dry land areas.

Sorghum is adapted to warm and dry climate but the greatest area of the crop is cultivated in drought-prone areas of the world. In these areas, sorghum is usually grown with limited inputs in conditions of sparse rainfall, low soil fertility, and face a range of disease and pest problems, with correspondingly poor yields.



Crop description:

- The plant height ranges from 50 to 170cm tall depending on the altitude.
- It has one main erect tiller and sometimes has 2-3 straight tiller.
- Grain colour is white with a hard endosperm and has no testa
- It flowers in 58-65 days and matures in 95-100 days.
- It has a potential yield of 4,000kg/ha with an average yield of 2500kg/ha or 1000 kg/acre.
- KARI Mtama-1 is highly tolerant to stalk borers and aphids.
- It recovers from drought very fast.
- It is highly palatable and sweet making it attractive to birds –
- In order to minimize the losses due to birds, a cluster of farmers should plant or cultivate the variety to increase the acreage in a location.

Agronomy

Land preparation:

Sorghum requires a fine seedbed. Ploughing can be done either by hoeing, tractor or oxen. It is advisable to harrow in case the field has big soil clods. The planting field should be prepared very early. It is recommended that land be ploughed immediately after harvesting the previous crop.

Planting

Time of planting: Practice spatial planting. Drill or plant in hills half of the field before the rains and plant the remaining half at the onset of rains.

Seed rate: 7-10kg/ha or 3-4kg/acre. Sole Crop: 60cm X 20cm
Intercrop: 120cm X 15cm and 1 row of legume between

Method of planting

Drill in furrows or plant in hills Thinning: Leave one seedling per hill 3 weeks after emergence or when plants are 6 inches high.

Thinning

should be done during the first weeding when the soil is moist.

Depth of planting

When dry planted, the depth should be 5.0cm but in moist soils plant at a depth of 2.5cm - 4.0cm.

Fertilizer Application

Apply 2 bags per hectare or 1 bag per acre of NPK (20:20:0) during planting and when necessary top-dress with one bag (50kg) of CAN per acre.

Weeding

First weeding should be done within two to three weeks after emergence. The second weeding should be done two weeks after the first weeding.

Crop Protection

Insect pests include the shootfly and stem borer. The major diseases include smut, charcoal rot, anthracnose, stem and leaf rust. Marshall or Dipterex should be used to control stem borers and shootfly at 3kg/ha. Seed should be dressed with a combination of fungicide and insecticide to control most of the diseases. Use scaring devices to control birds. It is advisable to have several farmers in a locality growing sorghum in order to share out the bird damage.

Harvesting

Harvest the crop when the grain is hard and does not produce milk when crushed between the fingers. The heads are harvested, threshed and stored in cool dry conditions. To control storage pests the grain should be dusted with super actellic at 50g per bag or any other effective storage chemical.